

*Zelus renardii* Kol. The assassin bug was prevalent on basil and other weeds.

*Reduviolus capsiformis* (Germ.). Another predacious bug was common in grasses.

*Nesosteles hospes* Kirk. On grasses.

*Oliarus discrepans* Giffard. The nymphs were found under a stone.

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### Insect Fauna of *Gossypium tomentosum*

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(Presented at the meeting of March 1, 1934)

This native species of cotton grows in dry lowland regions of Oahu and Molokai (according to Hillebrand, on all the islands). It is not known to have any species of endemic insect particularly attached to it. Dr. Perkins has recorded *Proterhinus deceptor* Perkins as occurring on it, but this beetle occurs on several other plants also. There is quite an area of *Gossypium tomentosum* among the algaroba trees of the flats west of Makapuu Head, Oahu. On February 4th, 1934, I made the effort to obtain some *Proterhinus deceptor* from these cotton plants, and succeeded in obtaining 5 specimens. While sweeping in the efforts to secure these, I obtained 2 specimens of *Rhyncogonus simplex* Perkins, the species which occurs on Molokai, and of which Mr. F. C. Hadden discovered a small colony on Koko Head, Oahu, January 11th, 1928.

Interested in learning more of this new colony of *Rhyncogonus*, I visited the region again on February 11th, when 53 specimens of the beetle were collected from the cotton plants. The beetles were found over an area of 100 yards or more in extent. Subsequent visits were made to the region to make observations on the seasonal occurrence, habits, etc., of *R. simplex*, and records kept of all kinds of insects which were taken on cotton at these times. The annotated list follows:

## COLEOPTERA

\**Rhyncogonus simplex* Perkins. The adult beetles feed on the leaves. The clusters of eggs are deposited between the edges of the folded-together tip of a leaf, which is cemented together for protection of the eggs. The larvae live in the ground.

\**Proterhinus deceptor* Perkins. The larvae live in dead twigs.

\**Hypothenemus maculicollis* Sharp. The larvae live in dead twigs.

*Hypothenemus eruditus* Westw. The larvae live in dead twigs,

*Catorama pusilla* Sharp. The larvae live in dead twigs.

*Prosoplus bankii* (Fab.). The larvae live in dead twigs.

*Sybra alternans* Wied. The larvae live in dead twigs.

*Diachus auratus* (Fab.). The adults and larvae are leaf-feeders.

## Ladybeetles

*Pullus kinbergi* (Boh.) Aphis-feeding ladybeetle.

*Scymnus notescens* (Blkb.). Aphis-feeding ladybeetle.

*Platymus lividigaster* Muls. Aphis-feeding ladybeetle.

*Coelophora inequalis* (Fab.). Aphis-feeding ladybeetle.

*Scymnus debilis* Lec. Mealybug-feeding ladybeetle.

*Nephus* sp. near *bipunctatus*. Mealybug-feeding ladybeetle.

*Cryptolaemus montrouzieri* Muls. Mealybug-feeding ladybeetle.

*Rhizobius ventralis* (Erich.). Mealybug-feeding ladybeetle.

*Curinus coeruleus* (Muls.). Mealybug-feeding ladybeetle.

*Lindorus lophanthae* (Blaisd.). Scale-feeding ladybeetle.

*Chilocorus circumdatus* Schön. Scale-feeding ladybeetle.

*Azya lutiepes* Muls. Scale-feeding ladybeetle.

*Rhodalia cardinalis* (Muls.). Feeds on cottony cushion scale.

## HETEROPTERA

*Zelus renardii* Kol. Predacious bug, feeding on many kinds of insects.

\**Ithamar hawaiiensis* Kirkaldy. Plant-feeding bug.

*Corizus hyalinus* (Fab.). Plant-feeding bug.

*Nysius delectus* White. Plant-feeding bug.

*Nysius coenosulus* Stal. Plant-feeding bug.

## HOMOPTERA

*Saissetia nigra* (Nietn.). Black scale.

*Hemichionaspis minor* (Mask.). Hibiscus scale.

*Icerya purchasi* Mask. Cottony cushion scale.

*Pseudococcus filamentosus* (Ckll.). Filamentous mealybug.

*Aphis gossypii* Glover. Cotton aphid.

\**Oliarus discrepans* Giffard.

#### NEUROPTERA

*Coniocompsa vesiculigera* End.

#### ISOPTERA

*Kalotermes immigrans* Snyder. Colonies in dead branches.

#### LEPIDOPTERA

*Platyedra gossypiella* (Saund.). Larvae feed in seeds.

#### HYMENOPTERA

*Lithurgus scabrosus* Smith. Bee, feeding at flowers.

*Megachile palmarum* Perkins. Bee, feeding at flowers.

*Solenopsis geminata rufa* (Jerdon). The fire ant.

*Paratrechina longicornis* (Lat.). The crazy ant.

*Plagiolepis mactavishi* Wheeler. The little yellow ant.

*Tapinoma melanocephalum* (Fab.). The black-headed ant.

*Pheidole megacephala* (Fab.). The big-headed ant.

*Perisierola emigrata* Rohwer. Parasite on *Platyedra gossypiella*.

*Glyptocolastes bruchivorus* Crawf. Parasite on bruchid in algaroba beans.

*Anagyrus dactylopii* (How.) Parasite of *Pseudococcus filamentosus*.

*Anagyrus* sp. An undetermined mealybug parasite.

*Bothriencyrtus insularis* (Cam.). Parasite of *Ferrisia virgata*.

*Protaeniasius* sp. A recently introduced mealybug parasite from Mexico.

\**Eupelmus* sp. A male. Parasitic habits not known.

Of these 49 species of insects very few are endemic in Hawaii (those marked with an asterisk probably are), the others are immigrants, or purposely introduced parasites, and ladybeetles.

At Kanoa, Molokai, October 27, 1930, the following Coleoptera were found boring in dead stems of this *Gossypium*:

*Amphicerus cornutus* (Pallas).

*Sinoxylon conigerum* Gerst.

*Xylopsocus castanoptera* (Fairm.).